

AUTHOR INDEX TO VOLUME 134

- Aguado, A., see M. Paniagua 134 (1989) 287
 Åkesson, E., see M. Kaschke 134 (1989) 85
 Aubert-Frécon, M., see B. Bussery 134 (1989) 7
- Balint-Kurti, G.G., see S.R. Cohen 134 (1989) 119
 Banerjee, A.K., see M. Vala 134 (1989) 149
 Beauchamp, J.L., see C.A. Wight 134 (1989) 375
 Bergström, H., see M. Kaschke 134 (1989) 85
 Bersohn, R., see J. Park 134 (1989) 421
 Bougeard, D., Lattice dynamics and intermolecular forces in α -P₄S₃ 134 (1989) 317
 Boyle, C.M., see S.A.C. Clark 134 (1989) 229
 Brion, C.E., see S.A.C. Clark 134 (1989) 229
 Bussery, B., M.E. Rosenkrantz, D.D. Konowalow and M. Aubert-Frécon, Semi-empirical determination of the long-range molecular states dissociating to C(³P_J) + O(³P_J) 134 (1989) 7
- Carlile, C.J., S. Clough, A.J. Horsewill and A. Smith, Observation of a dynamic coupling of methyl groups in 4-methylpyridine 134 (1989) 437
 Chowdhury, M., see M. Vala 134 (1989) 149
 Clark, S.A.C., E. Weigold, C.E. Brion, E.R. Davidson, R.F. Frey, C.M. Boyle, W. von Niessen and J. Schirmer, The valence orbital momentum distributions and binding energy spectra of silane by electron momentum spectroscopy: quantitative comparisons using Hartree-Fock limit and correlated wavefunctions 134 (1989) 229
 Clough, S., see C.J. Carlile 134 (1989) 437
 Cohen, S.R., R. Naaman and G.G. Balint-Kurti, Investigation of NO scattering from organic monolayers: spin-orbit state and vibrational state population distributions 134 (1989) 119
- Daudey, J.P., see A. Ramírez-Solís 134 (1989) 111
 Davidson, E.R., see S.A.C. Clark 134 (1989) 229
 Decleva, P., G. Fronzoni and A. Lisini, Theoretical study of the correlation effects in the photoelectron spectrum of bis(π -allyl)nickel 134 (1989) 307
 Di Marco, P., see W. Stampor 134 (1989) 385
 Dufayard, J., see O. Nédélec 134 (1989) 137
 Duguay, B., see M.T. Rayez 134 (1989) 55
- Fowler, P.W., A.C. Legon, C.A. Rego and P. Tole, Theoretical and experimental evidence for partial ionic character in the trimethylamine-hydrogen chloride dimer 134 (1989) 297
 Frey, R.F., see S.A.C. Clark 134 (1989) 229
 Fronzoni, G., see P. Decleva 134 (1989) 307
 Frood, D.G., see H. Mandal 134 (1989) 441
 Fujimura, Y., see Y. Ohtsuki 134 (1989) 103

AUTHOR INDEX TO VOLUME 134

- Aguado, A., see M. Paniagua 134 (1989) 287
 Åkesson, E., see M. Kaschke 134 (1989) 85
 Aubert-Frécon, M., see B. Bussery 134 (1989) 7
- Balint-Kurti, G.G., see S.R. Cohen 134 (1989) 119
 Banerjee, A.K., see M. Vala 134 (1989) 149
 Beauchamp, J.L., see C.A. Wight 134 (1989) 375
 Bergström, H., see M. Kaschke 134 (1989) 85
 Bersohn, R., see J. Park 134 (1989) 421
 Bougeard, D., Lattice dynamics and intermolecular forces in α -P₄S₃ 134 (1989) 317
 Boyle, C.M., see S.A.C. Clark 134 (1989) 229
 Brion, C.E., see S.A.C. Clark 134 (1989) 229
 Bussery, B., M.E. Rosenkrantz, D.D. Konowalow and M. Aubert-Frécon, Semi-empirical determination of the long-range molecular states dissociating to C(³P_J) + O(³P_J) 134 (1989) 7
- Carlile, C.J., S. Clough, A.J. Horsewill and A. Smith, Observation of a dynamic coupling of methyl groups in 4-methylpyridine 134 (1989) 437
 Chowdhury, M., see M. Vala 134 (1989) 149
 Clark, S.A.C., E. Weigold, C.E. Brion, E.R. Davidson, R.F. Frey, C.M. Boyle, W. von Niessen and J. Schirmer, The valence orbital momentum distributions and binding energy spectra of silane by electron momentum spectroscopy: quantitative comparisons using Hartree-Fock limit and correlated wavefunctions 134 (1989) 229
 Clough, S., see C.J. Carlile 134 (1989) 437
 Cohen, S.R., R. Naaman and G.G. Balint-Kurti, Investigation of NO scattering from organic monolayers: spin-orbit state and vibrational state population distributions 134 (1989) 119
- Daudey, J.P., see A. Ramírez-Solís 134 (1989) 111
 Davidson, E.R., see S.A.C. Clark 134 (1989) 229
 Decleva, P., G. Fronzoni and A. Lisini, Theoretical study of the correlation effects in the photoelectron spectrum of bis(π -allyl)nickel 134 (1989) 307
 Di Marco, P., see W. Stampor 134 (1989) 385
 Dufayard, J., see O. Nédélec 134 (1989) 137
 Duguay, B., see M.T. Rayez 134 (1989) 55
- Fowler, P.W., A.C. Legon, C.A. Rego and P. Tole, Theoretical and experimental evidence for partial ionic character in the trimethylamine-hydrogen chloride dimer 134 (1989) 297
 Frey, R.F., see S.A.C. Clark 134 (1989) 229
 Fronzoni, G., see P. Decleva 134 (1989) 307
 Frood, D.G., see H. Mandal 134 (1989) 441
 Fujimura, Y., see Y. Ohtsuki 134 (1989) 103

- Gerber, S. and H. Huber, Calculations of ^{14}N nuclear quadrupole coupling constants including electron correlation 134 (1989) 279
- Gillbro, T., see M. Kaschke 134 (1989) 85
- Gole, J.L., see J.R. Woodward 134 (1989) 395
- Grądzki, F., The potential of average force between two ions at infinite dilution in a solvent of polarizable hard spheres 134 (1989) 19
- Gruber, J.B., M.E. Hills, R.M. MacFarlane, C.A. Morrison and G.A. Turner, Symmetry, selection rules, and energy levels of $\text{Pr}^{3+}:\text{Y}_3\text{Al}_5\text{O}_{12}$ 134 (1989) 241
- Günthard, H.H., see T.-K. Ha 134 (1989) 203
- Ha, T.-K. and H.H. Günthard, Relaxation of structural parameters and potential coefficients of nonrigid molecules. General symmetry properties and application to ab initio study of 1,2-difluoroethane 134 (1989) 203
- Halvick, P., see M.T. Rayez 134 (1989) 55
- Hayden, J.S., see J.R. Woodward 134 (1989) 395
- Hills, M.E., see J.B. Gruber 134 (1989) 241
- Homlid, L., see G. Nyman 134 (1989) 355
- Horsewill, A.J., see C.J. Carlile 134 (1989) 437
- Huber, H., see S. Gerber 134 (1989) 279
- Hush, N.S., see J.R. Reimers 134 (1989) 323
- Kalinowski, J., see W. Stampor 134 (1989) 385
- Kaschke, M., E. Åkesson, H. Bergström, T. Gillbro and V. Sundström, Picosecond absorption studies of intermolecular electronic energy transfer in micellar systems. II. Polarization-dependent studies of energy migration and energy trapping at low donor excitation densities 134 (1989) 85
- Kikuma, J., see H. Umemoto 134 (1989) 193
- Kompa, K.L., see P.E. Share 134 (1989) 429
- Konowalow, D.D., see B. Busserly 134 (1989) 7
- Kurepa, J.M., see M.D. Tasić 134 (1989) 163
- Launay, J.M., see B. Lepetit 134 (1989) 93
- Lazzeretti, P., Electromagnetic moments and fields induced by nuclear spin, vibrational electric and magnetic field at the nuclei, and nuclear electromagnetic couplings in molecules 134 (1989) 269
- Le Dourneuf, M., see B. Lepetit 134 (1989) 93
- Legon, A.C., see P.W. Fowler 134 (1989) 297
- Lepetit, B., J.M. Launay and M. Le Dourneuf, Hyperspherical study of the reaction $\text{Cs} + \text{H}_2 \rightarrow \text{CsH} + \text{H}$ in the rotating linear model 134 (1989) 93
- Lin, M.C., see S. Zabarnick 134 (1989) 185
- Lisini, A., see P. Decleva 134 (1989) 307
- Lüders, K. and K.M. Salikhov, Theoretical treatment of differential recombination probabilities of radical pairs in high magnetic fields 134 (1989) 31
- Lushnikov, A.A., Random factors in chemical kinetics 134 (1989) 259
- MacFarlane, R.M., see J.B. Gruber 134 (1989) 241
- Majournat, B., see O. Nédélec 134 (1989) 137

- Mandal, H., D.G. Frood, M.A. Saleh, B.K. Morgan and S. Walker, Dielectric and viscosity studies of the principal relaxation process of liquid 1-alkanols and their solutions 134 (1989) 441
- Marković, N. and S. Nordholm, Trajectory study of collision complex formation. Weak to strong coupling transition in atom-diatomic molecule collisions 134 (1989) 69
- Masaki, A., see H. Umemoto 134 (1989) 193
- Mendaš, I. and P. Milutinović, Trajectory calculations of the capture rate coefficients for the $D_3^+ + C_6F_6$ reactions 134 (1989) 47
- Milutinović, P., see I. Mendaš 134 (1989) 47
- Morgan, B.K., see H. Mandal 134 (1989) 441
- Morrison, C.A., see J.B. Gruber 134 (1989) 241
- Naaman, R., see S.R. Cohen 134 (1989) 119
- Nédélec, O., B. Majournat and J. Dufayard, Configuration mixings and line intensities in CdH and HgH $A^2\Pi-X^2\Sigma^+$ transitions 134 (1989) 137
- Nordholm, S., see N. Marković 134 (1989) 69
- Nyman, G., K. Rynefors and L. Homlid, Energy distributions from decomposition of a complex $H_2O \rightarrow OH + H$ on a simplified potential energy surface, as a function of total angular momentum: comparison between classical trajectories and an RRKM-type statistical simulation 134 (1989) 355
- Ohtsuki, Y. and Y. Fujimura, Effects of bath-induced vibrational transitions on time-resolved resonant light scattering from molecules in condensed phases 134 (1989) 103
- Paniagua, M. and A. Aguado, Analysis of the electronic correlation energy in the LiFH PES using density functional methods 134 (1989) 287
- Park, J., C.-F. Yu and R. Bersohn, Photodissociation dynamics of the isomers phenyl cyanide and phenyl isocyanide 134 (1989) 421
- Petrović, Z.Lj., see M.D. Tasić 134 (1989) 163
- Pollak, E., see K. Stefanski 134 (1989) 37
- Pshezhetskii, S.Ya., see L.I. Trakhtenberg 134 (1989) 127
- Ramírez-Solis, A. and J.P. Daudey, Theoretical study of the spectroscopy of low-lying electronic states of the CuF molecule 134 (1989) 111
- Rayez, J.C., see M.T. Rayez 134 (1989) 55
- Rayez, M.T., J.C. Rayez, B. Duguay and P. Halvick, Four-atom exoergic indirect reactions $A + BCD \rightarrow AB + CD$. 1D-QCT study of some topological factors influencing the energetic distribution of the products 134 (1989) 55
- Rego, C.A., see P.W. Fowler 134 (1989) 297
- Reimers, J.R. and N.S. Hush, Electron transfer and energy transfer through bridged systems. I. Formalism 134 (1989) 323
- Robinson, G.W., see S.-B. Zhu 134 (1989) 1
- Rosenkrantz, M.E., see B. Busserly 134 (1989) 7
- Rynefors, K., see G. Nyman 134 (1989) 355
- Saleh, M.A., see H. Mandal 134 (1989) 441
- Salikhov, K.M., see K. Lüders 134 (1989) 31
- Sato, S., see H. Umemoto 134 (1989) 193

- Schirmer, J., see S.A.C. Clark 134 (1989) 229
- Share, P.E. and K.L. Kompa, An investigation of the excited state dynamics of cyclohexadiene in a supersonic jet 134 (1989) 429
- Slavinskaya, N.A., see L.I. Trakhtenberg 134 (1989) 127
- Small, G.J., see K. Song 134 (1989) 173
- Smith, A., see C.J. Carlile 134 (1989) 437
- Song, K. and G.J. Small, Single crystal absorption and fluorescence studies of tetramethyl-1,3-cyclobutanedione 134 (1989) 173
- Stampor, W., J. Kalinowski and P. Di Marco, Electroabsorption study of vacuum-deposited films of thionaphthenindole 134 (1989) 385
- Stefanski, K. and E. Pollak, Semiclassical theory of hyperspherical vibrational resonances in ABA molecules 134 (1989) 37
- Sundström, V., see M. Kaschke 134 (1989) 85
- Szczepanski, J., see M. Vala 134 (1989) 149
- Takayanagi, T., see H. Umemoto 134 (1989) 193
- Tasić, M.D., Z.Lj. Petrović and J.M. Kurepa, The influence of fast excited H fragments on Balmer line emission cross section measurements for H₂ and NH₃ molecules 134 (1989) 163
- Tole, P., see P.W. Fowler 134 (1989) 297
- Trakhtenberg, L.I., N.A. Slavinskaya and S.Ya. Pshezhetskii, The effect of dynamic properties of the medium on the kinetics of solid-state radical photodissociation processes 134 (1989) 127
- Turner, G.A., see J.B. Gruber 134 (1989) 241
- Umemoto, H., J. Kikuma, A. Masaki, T. Takayanagi and S. Sato, The intramultiplet mixing of Zn(4³P_J) by collisions with rare gas atoms 134 (1989) 193
- Vala, M., J. Szczepanski, A.K. Banerjee and M. Chowdhury, Polarized absorption spectra of the Nd³⁺ ion in the optically active Na₃Gd(diglycolate)₃·2NaClO₄·6H₂O single crystal 134 (1989) 149
- Von Niessen, W., see S.A.C. Clark 134 (1989) 229
- Walker, S., see H. Mandal 134 (1989) 441
- Weigold, E., see S.A.C. Clark 134 (1989) 229
- Wight, C.A. and J.L. Beauchamp, Multiphoton electron detachment studies of C₇H₇⁺ using a low-power infrared laser. Competition of radiative and collisional relaxation with vibrational excitation 134 (1989) 375
- Woodward, J.R., J.S. Hayden and J.L. Gole, Formation and characterization of a low-lying electronic state of the alkali monoxides LiO...CsO in the red and near infrared 134 (1989) 395
- Yu, C.-F., see J. Park 134 (1989) 421
- Zabarnick, S. and M.C. Lin, Kinetics of CN(X²Σ⁺) radical reactions with HCN, BrCN and CH₃CN 134 (1989) 185
- Zhu, S.-B. and G.W. Robinson, Lennard-Jones fluid between adiabatically moved interacting walls 134 (1989) 1

LIST OF SUBJECTS

1 METHODS

1.1 Theoretical

- 1.1.1 Group theory and algebras *
- 1.1.2 Classical mechanics *
- 1.1.3 Quantized field theory
- 1.1.4 Many body and quasiparticle approaches *
- 1.1.5 Coupling schemes and perturbative treatments *
- 1.1.6 Relativistic quantum mechanics
- 1.1.7 Transport quantum mechanics *
- 1.1.8 Equilibrium statistical mechanics *
- 1.1.9 Statistical mechanics of stationary states *
- 1.1.10 Non-equilibrium thermodynamic and hydrodynamic theories *
- 1.1.11 Ab initio schemes for stationary properties *
- 1.1.12 Computational and simulation methods *
- 1.1.13 Molecular dynamics and scattering theory *

1.2 Experimental

- 1.2.1 Magnetic resonances *
- 1.2.2 Cyclotron resonance *
- 1.2.3 Microwave spectroscopy *
- 1.2.4 Infrared spectroscopy *
- 1.2.5 Raman spectroscopy
- 1.2.6 Visible and UV spectroscopy *
- 1.2.7 Fluorescence spectroscopy *
- 1.2.8 Photoelectron and Auger spectroscopy
- 1.2.9 X-ray spectroscopy
- 1.2.10 Electron impact spectroscopy *
- 1.2.11 Laser methods *
- 1.2.12 Picosecond spectroscopy *
- 1.2.13 Non-linear optical spectroscopy
- 1.2.14 Synchrotron spectroscopies
- 1.2.15 Coherent optical spectroscopy
- 1.2.16 Optical pumping
- 1.2.17 Multiple resonance spectroscopy
- 1.2.18 Optoacoustic spectroscopy
- 1.2.19 Atomic and molecular beam techniques *
- 1.2.20 Time-resolved experiments *
- 1.2.21 Mass spectrometry *
- 1.2.22 Radiolysis
- 1.2.23 Mössbauer spectroscopy
- 1.2.24 X-ray, electron and neutron diffraction
- 1.2.25 Neutron scattering *
- 1.2.26 Light scattering
- 1.2.27 Field emission and field ionization
- 1.2.28 Measurement of macroscopic variables *

2 OBJECTS

2.1 Bulk systems

- 2.1.1 Gases *
- 2.1.2 Supersonic beams *
- 2.1.3 Liquids neat *
- 2.1.4 Liquid mixtures and solutions *
- 2.1.5 Crystals *
- 2.1.5.1 neat *
- 2.1.5.2 mixed *
- 2.1.6 Glasses
- 2.1.7 Liquid crystals
- 2.1.8 Polymers
- 2.1.9 Semiconductors
- 2.1.10 Metals and alloys
- 2.1.11 Thin films *
- 2.1.12 Surfaces *
- 2.1.13 Low-dimensional materials
- 2.1.14 Dielectrics *
- 2.1.15 Plasmas
- 2.1.16 Biological systems

2.2 Microscopic systems

- 2.2.1 Atoms *
- 2.2.2 Molecules (neutral and ionic) *
- 2.2.2.1 diatomic *
- 2.2.2.2 small polyatomics *
- 2.2.2.3 aromatics *
- 2.2.2.4 other large *
- 2.2.2.5 polymeric and biological
- 2.2.3 Molecular aggregates *
- 2.2.3.1 dimers
- 2.2.3.2 van der Waals molecules *
- 2.2.3.3 clusters
- 2.2.3.4 complexes *
- 2.2.4 Free radicals (including hydronium and muonium) *
- 2.2.5 Quasiparticles (including excitons)
- 2.2.6 Defects and impurities
- 2.2.7 Ions and charge carriers

* Denotes subjects covered in this volume

3 PHENOMENA

- 3.1 Molecular structure *
- 3.2 Vibrations and rotations of molecules *
- 3.3 Electronic structure and states *
- 3.4 Electric and magnetic properties *
- 3.5 Spin splittings
- 3.6 Optical activity
- 3.7 Molecular interactions *
- 3.8 Spectral bandshapes and intensities *
- 3.9 Coupling of electronic and nuclear motion *
- 3.10 Energy transfer processes *
- 3.11 Molecular photophysical processes *
- 3.12 Intramolecular dynamics *
- 3.12.1 radiationless transitions
- 3.12.2 vibrational energy redistribution (including vibrational dissociation)
- 3.13 Luminescence spectra, yields and lifetimes *
- 3.14 Coherence loss processes
- 3.15 Non-linear responses (including optical)
- 3.16 Multiphoton phenomena *
- 3.17 Reactions (including dissociation) *
- 3.17.1 gas phase *
- 3.17.2 condensed phase *
- 3.17.3 photochemical *
- 3.18 Tunnelling *
- 3.19 Electron transfer *
- 3.20 Positron annihilation
- 3.21 Ionization (including Rydberg states) *
- 3.22 Molecular motion (including diffusive)
- 3.23 Isotopic effects
- 3.24 Fluctuations and noise
- 3.25 Collective motion and excitations
- 3.26 Surface effects and catalysis *
- 3.27 Thermodynamic and transport properties
- 3.28 Structure of solids and liquids
- 3.29 Critical phenomena
- 3.30 Phase transitions *

SUBJECT INDEX TO VOLUME 134

METHODS

Theoretical

Group theory and algebras

- Relaxation of structural parameters and potential coefficients of nonrigid molecules. General symmetry properties and application to ab initio study of 1,2-difluoroethane, T.-K. Ha and H.H. Günthard 134 (1989) 203

Classical mechanics

- Semiclassical theory of hyperspherical vibrational resonances in ABA molecules, K. Stefanski and E. Pollak 134 (1989) 37
- Trajectory calculations of the capture rate coefficients for the $D_3^+ + C_6F_6$ reactions, I. Mendaš and P. Milutinović 134 (1989) 47

Many body and quasiparticle approaches

- The valence orbital momentum distributions and binding energy spectra of silane by electron momentum spectroscopy: quantitative comparisons using Hartree-Fock limit and correlated wavefunctions, S.A.C. Clark, E. Weigold, C.E. Brion, E.R. Davidson, R.F. Frey, C.M. Boyle, W. von Niessen and J. Schirmer 134 (1989) 229

Coupling schemes and perturbative treatments

- Semi-empirical determination of the long-range molecular states dissociating to $C(^3P_J) + O(^3P_J)$, B. Busser, M.E. Rosenkrantz, D.D. Konowalow and M. Aubert-Frécon 134 (1989) 7
- Symmetry, selection rules, and energy levels of $Pr^{3+} : Y_3Al_5O_{12}$, J.B. Gruber, M.E. Hills, R.M. MacFarlane, C.A. Morrison and G.A. Turner 134 (1989) 241

Transport quantum mechanics

- Theoretical treatment of differential recombination probabilities of radical pairs in high magnetic fields, K. Lüders and K.M. Salikhov 134 (1989) 31

Equilibrium statistical mechanics

- The potential of average force between two ions at infinite dilution in a solvent of polarizable hard spheres, F. Grządzi 134 (1989) 19

Statistical mechanics of stationary states

- Random factors in chemical kinetics, A.A. Lushnikov 134 (1989) 259

Non-equilibrium thermodynamic and hydrodynamic theories

- Lennard-Jones fluid between adiabatically moved interacting walls, S.-B. Zhu and G.W. Robinson 134 (1989) 1

Ab initio schemes for stationary properties

- Theoretical study of the spectroscopy of low-lying electronic states of the CuF molecule, A. Ramírez-Solís and J.P. Daudey 134 (1989) 111
- Relaxation of structural parameters and potential coefficients of nonrigid molecules. General symmetry properties and application to ab initio study of 1,2-difluoroethane, T.-K. Ha and H.H. Günthard 134 (1989) 203
- Random factors in chemical kinetics, A.A. Lushnikov 134 (1989) 259
- Electromagnetic moments and fields induced by nuclear spin, vibrational electric and magnetic field at the nuclei, and nuclear electromagnetic couplings in molecules, P. Lazzeretti 134 (1989) 269
- Calculations of ^{14}N nuclear quadrupole coupling constants including electron correlation, S. Gerber and H. Huber 134 (1989) 279
- Analysis of the electronic correlation energy in the LiFH PES using density functional methods, M. Paniagua and A. Aguado 134 (1989) 287
- Theoretical and experimental evidence for partial ionic character in the trimethylamine-hydrogen chloride dimer, P.W. Fowler, A.C. Legon, C.A. Rego and P. Tole 134 (1989) 297
- Theoretical study of the correlation effects in the photoelectron spectrum of bis(π -allyl)nickel, P. Decleva, G. Fronzoni and A. Lisini 134 (1989) 307

Computational and simulation methods

- Lennard-Jones fluid between adiabatically moved interacting walls, S.-B. Zhu and G.W. Robinson 134 (1989) 1
- Trajectory calculations of the capture rate coefficients for the $\text{D}_3^+ + \text{C}_6\text{F}_6$ reactions, I. Mendaš and P. Milutinović 134 (1989) 47
- Trajectory study of collision complex formation. Weak to strong coupling transition in atom-diatom molecule collisions, N. Marković and S. Nordholm 134 (1989) 69
- Lattice dynamics and intermolecular forces in $\alpha\text{-P}_4\text{S}_3$, D. Bougeard 134 (1989) 317
- Energy distributions from decomposition of a complex $\text{H}_2\text{O} \rightarrow \text{OH} + \text{H}$ on a simplified potential energy surface, as a function of total angular momentum: comparison between classical trajectories and an RRKM-type statistical simulation, G. Nyman, K. Rynefors and L. Homlid 134 (1989) 355

Molecular dynamics and scattering theory

- Semiclassical theory of hyperspherical vibrational resonances in ABA molecules, K. Stefanski and E. Pollak 134 (1989) 37
- Four-atom exoergic indirect reactions $\text{A} + \text{BCD} \rightarrow \text{AB} + \text{CD}$. 1D-QCT study of some topological factors influencing the energetic distribution of the products, M.T. Rayez, J.C. Rayez, B. Duguay and P. Halvick 134 (1989) 55
- Trajectory study of collision complex formation. Weak to strong coupling transition in atom-diatom molecule collisions, N. Marković and S. Nordholm 134 (1989) 69
- Picosecond absorption studies of intermolecular electronic energy transfer in micellar systems. II. Polarization-dependent studies of energy migration and energy trapping at low donor excitation densities, M. Kaschke, E. Åkesson, H. Bergström, T. Gillbro and V. Sundström 134 (1989) 85

- Hyperspherical study of the reaction $\text{Cs} + \text{H}_2 \rightarrow \text{CsH} + \text{H}$ in the rotating linear model, B. Lepetit, J.M. Launay and M. Le Dourneuf 134 (1989) 93
- Effects of bath-induced vibrational transitions on time-resolved resonant light scattering from molecules in condensed phases, Y. Ohtsuki and Y. Fujimura 134 (1989) 103
- Investigation of NO scattering from organic monolayers: spin-orbit state and vibrational state population distributions, S.R. Cohen, R. Naaman and G.G. Balint-Kurti 134 (1989) 119
- Electron transfer and energy transfer through bridged systems. I. Formalism, J.R. Reimers and N.S. Hush 134 (1989) 323
- Energy distributions from decomposition of a complex $\text{H}_2\text{O} \rightarrow \text{OH} + \text{H}$ on a simplified potential energy surface, as a function of total angular momentum: comparison between classical trajectories and an RRKM-type statistical simulation, G. Nyman, K. Rynefors and L. Homlid 134 (1989) 355
- Experimental**
- Magnetic resonances*
- Theoretical treatment of differential recombination probabilities of radical pairs in high magnetic fields, K. Lüders and K.M. Salikhov 134 (1989) 31
- Electromagnetic moments and fields induced by nuclear spin, vibrational electric and magnetic field at the nuclei, and nuclear electromagnetic couplings in molecules, P. Lazzeretti 134 (1989) 269
- Cyclotron resonance*
- Multiphoton electron detachment studies of C_7H_7^- using a low-power infrared laser. Competition of radiative and collisional relaxation with vibrational excitation, C.A. Wight and J.L. Beauchamp 134 (1989) 375
- Microwave spectroscopy*
- Electromagnetic moments and fields induced by nuclear spin, vibrational electric and magnetic field at the nuclei, and nuclear electromagnetic couplings in molecules, P. Lazzeretti 134 (1989) 269
- Theoretical and experimental evidence for partial ionic character in the trimethylamine-hydrogen chloride dimer, P.W. Fowler, A.C. Legon, C.A. Rego and P. Tole 134 (1989) 297
- Infrared spectroscopy*
- Symmetry, selection rules, and energy levels of $\text{Pr}^{3+} : \text{Y}_3\text{Al}_5\text{O}_{12}$, J.B. Gruber, M.E. Hills, R.M. MacFarlane, C.A. Morrison and G.A. Turner 134 (1989) 241
- Electromagnetic moments and fields induced by nuclear spin, vibrational electric and magnetic field at the nuclei, and nuclear electromagnetic couplings in molecules, P. Lazzeretti 134 (1989) 269
- Visible and UV spectroscopy*
- Configuration mixings and line intensities in CdH and HgH $A^2\Pi-X^2\Sigma^+$ transitions, O. Nédélec, B. Majournat and J. Dufayard 134 (1989) 137
- Polarized absorption spectra of the Nd^{3+} ion in the optically active $\text{Na}_3\text{Gd}(\text{diglycolate})_3 \cdot 2\text{NaClO}_4 \cdot 6\text{H}_2\text{O}$ single crystal, M. Vala, J. Szczepanski, A.K. Banerjee and M. Chowdhury 134 (1989) 149
- The influence of fast excited H fragments on Balmer line emission cross section measurements for H_2 and NH_3 molecules, M.D. Tasić, Z.Lj. Petrović and J.M. Kurepa 134 (1989) 163
- Single crystal absorption and fluorescence studies of tetramethyl-1,3-cyclobutanedione, K. Song and G.J. Small 134 (1989) 173

- Symmetry, selection rules, and energy levels of $\text{Pr}^{3+}:\text{Y}_3\text{Al}_5\text{O}_{12}$, J.B. Gruber, M.E. Hills, R.M. MacFarlane, C.A. Morrison and G.A. Turner 134 (1989) 241
- Electroabsorption study of vacuum-deposited films of thionaphthenindole, W. Stampor, J. Kalinowski and P. Di Marco 134 (1989) 385
- Formation and characterization of a low-lying electronic state of the alkali monoxides $\text{LiO}\dots\text{CsO}$ in the red and near infrared, J.R. Woodward, J.S. Hayden and J.L. Gole 134 (1989) 395
- Fluorescence spectroscopy*
- Single crystal absorption and fluorescence studies of tetramethyl-1,3-cyclobutanedione, K. Song and G.J. Small 134 (1989) 173
- Kinetics of $\text{CN}(X^2\Sigma^+)$ radical reactions with HCN, BrCN and CH_3CN , S. Zabarnick and M.C. Lin 134 (1989) 185
- Symmetry, selection rules, and energy levels of $\text{Pr}^{3+}:\text{Y}_3\text{Al}_5\text{O}_{12}$, J.B. Gruber, M.E. Hills, R.M. MacFarlane, C.A. Morrison and G.A. Turner 134 (1989) 241
- Formation and characterization of a low-lying electronic state of the alkali monoxides $\text{LiO}\dots\text{CsO}$ in the red and near infrared, J.R. Woodward, J.S. Hayden and J.L. Gole 134 (1989) 395
- Photodissociation dynamics of the isomers phenyl cyanide and phenyl isocyanide, J. Park, C.-F. Yu and R. Bersohn 134 (1989) 421
- Electron impact spectroscopy*
- The valence orbital momentum distributions and binding energy spectra of silane by electron momentum spectroscopy: quantitative comparisons using Hartree-Fock limit and correlated wavefunctions, S.A.C. Clark, E. Weigold, C.E. Brion, E.R. Davidson, R.F. Frey, C.M. Boyle, W. von Niessen and J. Schirmer 134 (1989) 229
- Laser methods*
- The intramultiplet mixing of $\text{Zn}(4^3\text{P}_1)$ by collisions with rare gas atoms, H. Umemoto, J. Kikuma, A. Masaki, T. Takayanagi and S. Sato 134 (1989) 193
- Multiphoton electron detachment studies of C_7H_7^- using a low-power infrared laser. Competition of radiative and collisional relaxation with vibrational excitation, C.A. Wight and J.L. Beauchamp 134 (1989) 375
- Photodissociation dynamics of the isomers phenyl cyanide and phenyl isocyanide, J. Park, C.-F. Yu and R. Bersohn 134 (1989) 421
- Picosecond spectroscopy*
- Picosecond absorption studies of intermolecular electronic energy transfer in micellar systems. II. Polarization-dependent studies of energy migration and energy trapping at low donor excitation densities, M. Kaschke, E. Åkesson, H. Bergström, T. Gillbro and V. Sundström 134 (1989) 85
- Atomic and molecular beam techniques*
- Investigation of NO scattering from organic monolayers: spin-orbit state and vibrational state population distributions, S.R. Cohen, R. Naaman and G.G. Balint-Kurti 134 (1989) 119
- An investigation of the excited state dynamics of cyclohexadiene in a supersonic jet, P.E. Share and K.L. Kompa 134 (1989) 429

Time-resolved experiments

- Theoretical treatment of differential recombination probabilities of radical pairs in high magnetic fields, K. Lüders and K.M. Salikhov 134 (1989) 31
- Kinetics of $CN(X^2\Sigma^+)$ radical reactions with HCN, BrCN and CH_3CN , S. Zabarnick and M.C. Lin 134 (1989) 185
- The intramultiplet mixing of $Zn(4^3P_J)$ by collisions with rare gas atoms, H. Umemoto, J. Kikuma, A. Masaki, T. Takayanagi and S. Sato 134 (1989) 193
- Electron transfer and energy transfer through bridged systems. I. Formalism, J.R. Reimers and N.S. Hush 134 (1989) 323

Mass spectrometry

- An investigation of the excited state dynamics of cyclohexadiene in a supersonic jet, P.E. Share and K.L. Kompa 134 (1989) 429

Neutron scattering

- Observation of a dynamic coupling of methyl groups in 4-methylpyridine, C.J. Carlile, S. Clough, A.J. Horsewill and A. Smith 134 (1989) 437

Measurement of macroscopic variables

- Dielectric and viscosity studies of the principal relaxation process of liquid 1-alkanols and their solutions, H. Mandal, D.G. Frood, M.A. Saleh, B.K. Morgan and S. Walker 134 (1989) 441

OBJECTS**Bulk systems***Gases*

- Semi-empirical determination of the long-range molecular states dissociating to $C(^3P_J) + O(^3P_J)$, B. Bussery, M.E. Rosenkrantz, D.D. Konowalow and M. Aubert-Frécon 134 (1989) 7
- Four-atom exoergic indirect reactions $A + BCD \rightarrow AB + CD$. 1D-QCT study of some topological factors influencing the energetic distribution of the products, M.T. Rayez, J.C. Rayez, B. Duguay and P. Halvick 134 (1989) 55
- Trajectory study of collision complex formation. Weak to strong coupling transition in atom-diatomic molecule collisions, N. Marković and S. Nordholm 134 (1989) 69
- Kinetics of $CN(X^2\Sigma^+)$ radical reactions with HCN, BrCN and CH_3CN , S. Zabarnick and M.C. Lin 134 (1989) 185
- Multiphoton electron detachment studies of $C_7H_7^-$ using a low-power infrared laser. Competition of radiative and collisional relaxation with vibrational excitation, C.A. Wight and J.L. Beauchamp 134 (1989) 375

Supersonic beams

- Hyperspherical study of the reaction $Cs + H_2 \rightarrow CsH + H$ in the rotating linear model, B. Lepetit, J.M. Launay and M. Le Dourneuf 134 (1989) 93
- An investigation of the excited state dynamics of cyclohexadiene in a supersonic jet, P.E. Share and K.L. Kompa 134 (1989) 429

Liquids neat

- Lennard-Jones fluid between adiabatically moved interacting walls, S.-B. Zhu and G.W. Robinson 134 (1989) 1
- Dielectric and viscosity studies of the principal relaxation process of liquid 1-alkanols and their solutions, H. Mandal, D.G. Frood, M.A. Saleh, B.K. Morgan and S. Walker 134 (1989) 441

Liquid mixtures and solutions

- The potential of average force between two ions at infinite dilution in a solvent of polarizable hard spheres, F. Grządzi 134 (1989) 19
- Theoretical treatment of differential recombination probabilities of radical pairs in high magnetic fields, K. Lüders and K.M. Salikhov 134 (1989) 31
- Dielectric and viscosity studies of the principal relaxation process of liquid 1-alkanols and their solutions, H. Mandal, D.G. Frood, M.A. Saleh, B.K. Morgan and S. Walker 134 (1989) 441

Crystals

- Polarized absorption spectra of the Nd^{3+} ion in the optically active $\text{Na}_3\text{Gd}(\text{diglycolate})_3 \cdot 2\text{NaClO}_4 \cdot 6\text{H}_2\text{O}$ single crystal, M. Vala, J. Szczepanski, A.K. Banerjee and M. Chowdhury 134 (1989) 149
- Lattice dynamics and intermolecular forces in $\alpha\text{-P}_4\text{S}_3$, D. Bougeard 134 (1989) 317

-neat

- Single crystal absorption and fluorescence studies of tetramethyl-1,3-cyclobutanedione, K. Song and G.J. Small 134 (1989) 173
- Observation of a dynamic coupling of methyl groups in 4-methylpyridine, C.J. Carlile, S. Clough, A.J. Horsewill and A. Smith 134 (1989) 437

-mixed

- Effects of bath-induced vibrational transitions on time-resolved resonant light scattering from molecules in condensed phases, Y. Ohtsuki and Y. Fujimura 134 (1989) 103
- Polarized absorption spectra of the Nd^{3+} ion in the optically active $\text{Na}_3\text{Gd}(\text{diglycolate})_3 \cdot 2\text{NaClO}_4 \cdot 6\text{H}_2\text{O}$ single crystal, M. Vala, J. Szczepanski, A.K. Banerjee and M. Chowdhury 134 (1989) 149

Thin films

- Electroabsorption study of vacuum-deposited films of thionaphthenindole, W. Stampor, J. Kalinowski and P. Di Marco 134 (1989) 385

Surfaces

- Lennard-Jones fluid between adiabatically moved interacting walls, S.-B. Zhu and G.W. Robinson 134 (1989) 1
- Picosecond absorption studies of intermolecular electronic energy transfer in micellar systems. II. Polarization-dependent studies of energy migration and energy trapping at low donor excitation densities, M. Kaschke, E. Åkesson, H. Bergström, T. Gillbro and V. Sundström 134 (1989) 85
- Investigation of NO scattering from organic monolayers: spin-orbit state and vibrational state population distributions, S.R. Cohen, R. Naaman and G.G. Balint-Kurti 134 (1989) 119

Dielectrics

- Dielectric and viscosity studies of the principal relaxation process of liquid 1-alkanols and their solutions, H. Mandal, D.G. Froot, M.A. Saleh, B.K. Morgan and S. Walker 134 (1989) 441

*Microscopic systems**Atoms*

- The intramultiplet mixing of $\text{Zn}(4^3P_J)$ by collisions with rare gas atoms, H. Umemoto, J. Kikuma, A. Masaki, T. Takayanagi and S. Sato 134 (1989) 193

Molecules (neutral and ionic)

- The influence of fast excited H fragments on Balmer line emission cross section measurements for H_2 and NH_3 molecules, M.D. Tasić, Z.Lj. Petrović and J.M. Kurepa 134 (1989) 163
- Relaxation of structural parameters and potential coefficients of nonrigid molecules. General symmetry properties and application to ab initio study of 1,2-difluoroethane, T.-K. Ha and H.H. Günthard 134 (1989) 203
- Theoretical study of the correlation effects in the photoelectron spectrum of bis(π -allyl)nickel, P. Decleva, G. Fronzoni and A. Lisini 134 (1989) 307

-diatomic

- Semi-empirical determination of the long-range molecular states dissociating to $\text{C}(^3P_J) + \text{O}(^3P_J)$, B. Bussery, M.E. Rosenkrantz, D.D. Konowalow and M. Aubert-Frécon 134 (1989) 7
- Theoretical study of the spectroscopy of low-lying electronic states of the CuF molecule, A. Ramírez-Solís and J.P. Daudey 134 (1989) 111
- Configuration mixings and line intensities in CdH and HgH $A^2\Pi-X^2\Sigma^+$ transitions, O. Nédélec, B. Majournat and J. Dufayard 134 (1989) 137
- The influence of fast excited H fragments on Balmer line emission cross section measurements for H_2 and NH_3 molecules, M.D. Tasić, Z.Lj. Petrović and J.M. Kurepa 134 (1989) 163
- Formation and characterization of a low-lying electronic state of the alkali monoxides LiO...CsO in the red and near infrared, J.R. Woodward, J.S. Hayden and J.L. Gole 134 (1989) 395

-small polyatomics

- Semiclassical theory of hyperspherical vibrational resonances in ABA molecules, K. Stefanski and E. Pollak 134 (1989) 37
- Four-atom exoergic indirect reactions $A + \text{BCD} \rightarrow \text{AB} + \text{CD}$. 1D-QCT study of some topological factors influencing the energetic distribution of the products, M.T. Rayez, J.C. Rayez, B. Duguay and P. Halvick 134 (1989) 55
- The influence of fast excited H fragments on Balmer line emission cross section measurements for H_2 and NH_3 molecules, M.D. Tasić, Z.Lj. Petrović and J.M. Kurepa 134 (1989) 163
- The valence orbital momentum distributions and binding energy spectra of silane by electron momentum spectroscopy: quantitative comparisons using Hartree-Fock limit and correlated wavefunctions, S.A.C. Clark, E. Weigold, C.E. Brion, E.R. Davidson, R.F. Frey, C.M. Boyle, W. von Niessen and J. Schirmer 134 (1989) 229
- Calculations of ^{14}N nuclear quadrupole coupling constants including electron correlation, S. Gerber and H. Huber 134 (1989) 279
- Analysis of the electronic correlation energy in the LiFH PES using density functional methods, M. Paniagua and A. Aguado 134 (1989) 287

-aromatics

- Effects of bath-induced vibrational transitions on time-resolved resonant light scattering from molecules in condensed phases, Y. Ohtsuki and Y. Fujimura 134 (1989) 103
- Photodissociation dynamics of the isomers phenyl cyanide and phenyl isocyanide, J. Park, C.-F. Yu and R. Bersohn 134 (1989) 421
- Observation of a dynamic coupling of methyl groups in 4-methylpyridine, C.J. Carlile, S. Clough, A.J. Horsewill and A. Smith 134 (1989) 437

-other large

- Theoretical study of the correlation effects in the photoelectron spectrum of bis(π -allyl)nickel, P. Decleva, G. Fronzoni and A. Lisini 134 (1989) 307

Molecular aggregates

- Electron transfer and energy transfer through bridged systems. I. Formalism, J.R. Reimers and N.S. Hush 134 (1989) 323

-van der Waals molecules

- Theoretical and experimental evidence for partial ionic character in the trimethylamine-hydrogen chloride dimer, P.W. Fowler, A.C. Legon, C.A. Rego and P. Tole 134 (1989) 297

-complexes

- Trajectory study of collision complex formation. Weak to strong coupling transition in atom-diatomic molecule collisions, N. Marković and S. Nordholm 134 (1989) 69
- Energy distributions from decomposition of a complex $\text{H}_2\text{O} \rightarrow \text{OH} + \text{H}$ on a simplified potential energy surface, as a function of total angular momentum: comparison between classical trajectories and an RRKM-type statistical simulation, G. Nyman, K. Rynefors and L. Homlid 134 (1989) 355

Free radicals (including hydronium and muonium)

- The effect of dynamic properties of the medium on the kinetics of solid-state radical photodissociation processes, L.I. Trakhtenberg, N.A. Slavinskaya and S.Ya. Pshezhetskii 134 (1989) 127
- Kinetics of $\text{CN}(\text{X}^2\Sigma^+)$ radical reactions with HCN, BrCN and CH_3CN , S. Zabarnick and M.C. Lin 134 (1989) 185

PHENOMENA*Molecular structure*

- Configuration mixings and line intensities in CdH and HgH $\text{A}^2\Pi - \text{X}^2\Sigma^+$ transitions, O. Nédélec, B. Majournat and J. Dufayard 134 (1989) 137
- Relaxation of structural parameters and potential coefficients of nonrigid molecules. General symmetry properties and application to ab initio study of 1,2-difluoroethane, T.-K. Ha and H.H. Günthard 134 (1989) 203
- Formation and characterization of a low-lying electronic state of the alkali monoxides $\text{LiO} \dots \text{CsO}$ in the red and near infrared, J.R. Woodward, J.S. Hayden and J.L. Gole 134 (1989) 395

Vibrations and rotations of molecules

- Semiclassical theory of hyperspherical vibrational resonances in ABA molecules, K. Stefanski and E. Pollak 134 (1989) 37

- Relaxation of structural parameters and potential coefficients of nonrigid molecules. General symmetry properties and application to ab initio study of 1,2-difluoroethane, T.-K. Ha and H.H. Günthard 134 (1989) 203
- Observation of a dynamic coupling of methyl groups in 4-methylpyridine, C.J. Carlile, S. Clough, A.J. Horsewill and A. Smith 134 (1989) 437
- Electronic structure and states*
- Semi-empirical determination of the long-range molecular states dissociating to $C(^3P_J) + O(^3P_J)$, B. Bussery, M.E. Rosenkrantz, D.D. Konowalow and M. Aubert-Frécon 134 (1989) 7
- Theoretical study of the spectroscopy of low-lying electronic states of the CuF molecule, A. Ramírez-Solis and J.P. Daudey 134 (1989) 111
- Polarized absorption spectra of the Nd^{3+} ion in the optically active $Na_3Gd(diglycolate)_3 \cdot 2NaClO_4 \cdot 6H_2O$ single crystal, M. Vala, J. Szczepanski, A.K. Banerjee and M. Chowdhury 134 (1989) 149
- Single crystal absorption and fluorescence studies of tetramethyl-1,3-cyclobutanedione, K. Song and G.J. Small 134 (1989) 173
- The valence orbital momentum distributions and binding energy spectra of silane by electron momentum spectroscopy: quantitative comparisons using Hartree-Fock limit and correlated wavefunctions, S.A.C. Clark, E. Weigold, C.E. Brion, E.R. Davidson, R.F. Frey, C.M. Boyle, W. von Niessen and J. Schirmer 134 (1989) 229
- Symmetry, selection rules, and energy levels of $Pr^{3+} : Y_3Al_5O_{12}$, J.B. Gruber, M.E. Hills, R.M. MacFarlane, C.A. Morrison and G.A. Turner 134 (1989) 241
- Theoretical study of the correlation effects in the photoelectron spectrum of bis(π -allyl)nickel, P. Decleva, G. Fronzoni and A. Lisini 134 (1989) 307
- Electroabsorption study of vacuum-deposited films of thionaphthenindole, W. Stampor, J. Kalinowski and P. Di Marco 134 (1989) 385
- Formation and characterization of a low-lying electronic state of the alkali monoxides $LiO \dots CsO$ in the red and near infrared, J.R. Woodward, J.S. Hayden and J.L. Gole 134 (1989) 395
- An investigation of the excited state dynamics of cyclohexadiene in a supersonic jet, P.E. Share and K.L. Kompa 134 (1989) 429
- Electric and magnetic properties*
- Calculations of ^{14}N nuclear quadrupole coupling constants including electron correlation, S. Gerber and H. Huber 134 (1989) 279
- Molecular interactions*
- The potential of average force between two ions at infinite dilution in a solvent of polarizable hard spheres, F. Grządzi 134 (1989) 19
- Analysis of the electronic correlation energy in the LiFH PES using density functional methods, M. Paniagua and A. Aguado 134 (1989) 287
- Theoretical and experimental evidence for partial ionic character in the trimethylamine-hydrogen chloride dimer, P.W. Fowler, A.C. Legon, C.A. Rego and P. Tole 134 (1989) 297
- Lattice dynamics and intermolecular forces in α - P_4S_3 , D. Bougeard 134 (1989) 317
- Dielectric and viscosity studies of the principal relaxation process of liquid 1-alkanols and their solutions, H. Mandal, D.G. Frood, M.A. Saleh, B.K. Morgan and S. Walker 134 (1989) 441

Spectral bandshapes and intensities

- The influence of fast excited H fragments on Balmer line emission cross section measurements for H_2 and NH_3 molecules, M.D. Tasić, Z.Lj. Petrović and J.M. Kurepa 134 (1989) 163

Coupling of electronic and nuclear motion

- Hyperspherical study of the reaction $Cs + H_2 \rightarrow CsH + H$ in the rotating linear model, B. Lepetit, J.M. Launay and M. Le Dourneuf 134 (1989) 93
- Single crystal absorption and fluorescence studies of tetramethyl-1,3-cyclobutanedione, K. Song and G.J. Small 134 (1989) 173

Energy transfer processes

- Picosecond absorption studies of intermolecular electronic energy transfer in micellar systems. II. Polarization-dependent studies of energy migration and energy trapping at low donor excitation densities, M. Kaschke, E. Åkesson, H. Bergström, T. Gillbro and V. Sundström 134 (1989) 85
- Effects of bath-induced vibrational transitions on time-resolved resonant light scattering from molecules in condensed phases, Y. Ohtsuki and Y. Fujimura 134 (1989) 103
- Investigation of NO scattering from organic monolayers: spin-orbit state and vibrational state population distributions, S.R. Cohen, R. Naaman and G.G. Balint-Kurti 134 (1989) 119
- The intramultiplet mixing of $Zn(4^3P_1)$ by collisions with rare gas atoms, H. Umemoto, J. Kikuma, A. Masaki, T. Takayanagi and S. Sato 134 (1989) 193
- Electron transfer and energy transfer through bridged systems. I. Formalism, J.R. Reimers and N.S. Hush 134 (1989) 323

Molecular photophysical processes

- Multiphoton electron detachment studies of $C_7H_7^-$ using a low-power infrared laser. Competition of radiative and collisional relaxation with vibrational excitation, C.A. Wight and J.L. Beauchamp 134 (1989) 375

Intramolecular dynamics

- The effect of dynamic properties of the medium on the kinetics of solid-state radical photodissociation processes, L.I. Trakhtenberg, N.A. Slavinskaya and S.Ya. Pshezhetskii 134 (1989) 127

Luminescence spectra, yields and lifetimes

- Theoretical treatment of differential recombination probabilities of radical pairs in high magnetic fields, K. Lüders and K.M. Salikhov 134 (1989) 31
- Effects of bath-induced vibrational transitions on time-resolved resonant light scattering from molecules in condensed phases, Y. Ohtsuki and Y. Fujimura 134 (1989) 103

Multiphoton phenomena

- Multiphoton electron detachment studies of $C_7H_7^-$ using a low-power infrared laser. Competition of radiative and collisional relaxation with vibrational excitation, C.A. Wight and J.L. Beauchamp 134 (1989) 375

Reactions (including dissociation)

- Energy distributions from decomposition of a complex $H_2O \rightarrow OH + H$ on a simplified potential energy surface, as a function of total angular momentum: comparison between classical trajectories and an RRKM-type statistical simulation, G. Nyman, K. Rynefors and L. Homlid 134 (1989) 355

-gas phase

- Semiclassical theory of hyperspherical vibrational resonances in ABA molecules, K. Stefanski and E. Pollak 134 (1989) 37
- Trajectory calculations of the capture rate coefficients for the $D_3^+ + C_6F_6$ reactions, I. Mendaš and P. Milutinović 134 (1989) 47
- Four-atom exoergic indirect reactions $A + BCD \rightarrow AB + CD$. 1D-QCT study of some topological factors influencing the energetic distribution of the products, M.T. Rayez, J.C. Rayez, B. Duguay and P. Halvick 134 (1989) 55
- Trajectory study of collision complex formation. Weak to strong coupling transition in atom-diatom molecule collisions, N. Marković and S. Nordholm 134 (1989) 69
- Hyperspherical study of the reaction $Cs + H_2 \rightarrow CsH + H$ in the rotating linear model, B. Lepetit, J.M. Launay and M. Le Dourneuf 134 (1989) 93
- Kinetics of $CN(X^2\Sigma^+)$ radical reactions with HCN, BrCN and CH_3CN , S. Zabarnick and M.C. Lin 134 (1989) 185
- Energy distributions from decomposition of a complex $H_2O \rightarrow OH + H$ on a simplified potential energy surface, as a function of total angular momentum: comparison between classical trajectories and an RRKM-type statistical simulation, G. Nyman, K. Rynefors and L. Homlid 134 (1989) 355
- Formation and characterization of a low-lying electronic state of the alkali monoxides $LiO \dots CsO$ in the red and near infrared, J.R. Woodward, J.S. Hayden and J.L. Gole 134 (1989) 395

-condensed phase

- Lennard-Jones fluid between adiabatically moved interacting walls, S.-B. Zhu and G.W. Robinson 134 (1989) 1

-photochemical

- The effect of dynamic properties of the medium on the kinetics of solid-state radical photodissociation processes, L.I. Trakhtenberg, N.A. Slavinskaya and S.Ya. Pshezhetskii 134 (1989) 127
- Photodissociation dynamics of the isomers phenyl cyanide and phenyl isocyanide, J. Park, C.-F. Yu and R. Bersohn 134 (1989) 421

Tunnelling

- Observation of a dynamic coupling of methyl groups in 4-methylpyridine, C.J. Carlile, S. Clough, A.J. Horsewill and A. Smith 134 (1989) 437

Electron transfer

- Electron transfer and energy transfer through bridged systems. I. Formalism, J.R. Reimers and N.S. Hush 134 (1989) 323

Ionization (including Rydberg states)

- The valence orbital momentum distributions and binding energy spectra of silane by electron momentum spectroscopy: quantitative comparisons using Hartree-Fock limit and correlated wavefunctions, S.A.C. Clark, E. Weigold, C.E. Brion, E.R. Davidson, R.F. Frey, C.M. Boyle, W. von Niessen and J. Schirmer 134 (1989) 229
- Theoretical study of the correlation effects in the photoelectron spectrum of bis(π -allyl)nickel, P. Decleva, G. Fronzoni and A. Lisini 134 (1989) 307

Surface effects and catalysis

- Investigation of NO scattering from organic monolayers: spin-orbit state and vibrational state population distributions, S.R. Cohen, R. Naaman and G.G. Balint-Kurti 134 (1989) 119

Phase transitions

- Lattice dynamics and intermolecular forces in α -P₄S₃, D. Bougeard 134 (1989) 317